# ABSTRACT

This object is to conclude an agreement for making an insertion interval of a pilot signal variable between radio communication apparatuses and improve a throughput of a communication. A pilot signal insertion interval acquiring unit 3 acquires the insertion interval of the pilot signal (known reference signal) which is optimal in a propagation path to a predetermined radio communication apparatus, from a signal sent through an antenna 9 and a receiving RF unit 1, or information sent from a higher layer. Then, in accordance with the insertion interval of this pilot signal, the pilot signal is inserted into a transmission data, and it is transmitted, or the insertion interval of the pilot signal is reported as the transmission data to a different radio communication apparatus. Thus, the insertion interval of the pilot signal in the propagation path can be made optimal. By the way, from a temporal variation quantity of a propagation response, the insertion interval of the pilot signal that becomes optimal is calculated, thereby enabling the acquisition of the insertion interval of the pilot signal that is more proper.